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There are especially interesting chapters on the various aspects of the development of complex co-ordinated activities. The difficulty of acquiring new adjustments by merely seeing them in others is pointed out with many illustrations. "Do everything you can to aid the learner in gaining just the right motor experience," is the author's final word regarding the most economical method of teaching new co-ordinations, whether of arms, fingers, or vocal organs.

Under the heading of "The Energetic Factor in Education" the question of fatigue in the school is taken up; the different ways by which it has been measured, tests, mental and physical, are discussed, and their limitations are clearly pointed out. Attention is called to the great individual difference in children in the manner of expending nervous energy. Some children are said to have leaky nervous systems, others are characterized as thrifty in the expenditure of their nerve force. Schoolroom procedures which are wasteful and those which are economical of nervous force are helpfully discussed. Among practices of the former type he includes all excessively fine work, certain varieties of postures in sitting, all kinds of noise, etc. The practical deductions from these facts find expression in a chapter on how to avoid waste in the arrangement of the daily program, etc.

Suggestive questions and topics for discussion are found at the close of each chapter, and at the close of the volume are a good bibliography and an index. The mechanical part of the book is particularly satisfactory, the binding being firm and yet entirely flexible, and the topics of the paragraphs being indicated in bold-faced type on the open margins of the pages.

The author is to be commended for his fresh and instructive discussion of well-known topics, and especially for the abundance of new illustration which he has gathered both by his own observation and from the recent literature. On the whole, we know of no more satisfactory discussion of what is thus far known of the evolution of motor control, its relation to education, and of the place of the manual arts in education.

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A Course in Practical Mathematics. By F. M. SAXELBY. London and New York, 1905. Pp. viii + 438.

The agitation in favor of closer relation between mathematics and the concrete practical side of life, which has been stirring up mathematical circles in England for some years past, and which is in essence a manifestation of a fundamental tendency of the times that can be seen effectively at work in Germany, France, and to some extent in America, as well as in England, has called forth a host of textbooks entitled "Practical Mathematics," or some similar phrase, and intended to give tangible shape, from the classroom point of view, to the ideas that are being presented in the theoretic discussions. These books have usually fallen within the secondary field; the work before us is of collegiate grade, and aims to extend to the field of collegiate mathematics, including the calculus, the experimental methods that are now finding such favor in England, especially in the field of elementary geometry and algebra.

To this end, experimental approximation and graphic methods are freely used, constant appeal is made to the intuition, and the exercises are usually taken from the other sciences, and from the technical subjects. The logical proof is regarded rather as the climax of the work than as its foundation. Thus both differentiation and

integration are preceded by chapters treating the subject by means of particular examples handled by graphic, arithmetic, and intuitional methods.

As to subject-matter, the work is distributed as follows: logarithms and plane trigonometry, pp. 1-47; use of formulæ, and miscellaneous equations and identities (variation, mensurational formulæ, linear and quadratic equations, partial fractions), pp. 48-77; plotting of functions, pp. 78-126; determination of laws from experimental data, mean values, pp. 127-69; differentiation, and applications, pp. 170-233; indefinite and definite integrals, pp. 234-75; vector algebra, pp. 276-308; solid co-ordinate geometry and applications, pp. 309-61; partial differentiation, miscellaneous methods of integration, some partial differential equations of applied physics, pp. 362-95; examination papers, answers, tables, pp. 396-438.

The work is well written and well illustrated. The figures and tabular matter are large and clear; but the type used is too small and decidedly trying to the eye in protracted use. True, the book is already quite large, and an appreciable increase in the size of the type would make it bulky; but considerable space could be gained by reducing quite materially the scale of the figures, and setting the tabular matter in more condensed form.

The work is well suited for use as text in courses in calculus conducted with the purpose of laying dominating stress on graphic, computational, experimental, approximative treatment; and all teachers of calculus will find in this book a rich fund of exercises which can be drawn upon for practical problems in connection with any introductory course in the subject.

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Lessons in English. By FRED N. SCOTT AND GORDON A. SOUTHWORTH. Boston: Benj. H. Sanborn & Co. Book I, pp. 238; Book II, pp. 371.

Lessons in English is a two-book course in English for the elementary school. With the considerable variation in the English courses of the schools in mind, the authors announce in their preface that Book I may be used for two or three years within Grades III-VI, and that Book II provides systematic lessons in grammar and composition for the three higher grades. The aims are stated to be to create a liking for good literature, to help children to talk and write more freely, to make them more and more observing, to make correct expression habitual, and to place before the student an orderly and intelligible statement of the principles that determine the structure of words and sentences.

The authors of these books are well known by their previous work in the field of English, and the reader finds, as might be expected, many familiar features and devices. Among these are the emphasis upon oral language, the use of models for inductive study, the comparison of pictures, and the suggestive leading question. The emphasis upon letter-writing is wisely placed, and the exercises for practice in composing letters and business forms are very ingenious and practical. There is also a gratifying recognition of the natural interests of children; the practice called for will, for the most part, arouse the willing activity of the learner. The attempt to maintain a balance of literary English and good current speech is to be commended.

Book I is, on the whole, more sound and attractive than Book II. The analytic order of treatment has been adopted in the grammar, it is true, but the arrangement of the lessons could be improved. There are far too many sections. The main topics do not stand out, and, therefore, the pupil is likely to be somewhat bewildered